



Late-Spring Electrofishing Survey Summary Eureka Lake, Ashland County, 2013

Survey Description

The Mercer DNR Fisheries Management Team conducted a late-spring electrofishing survey at Eureka Lake on May 27, 2013. The lake was surveyed for purposes of obtaining representative samples of the bass and panfish populations. Water temperatures during the survey were in the upper 50s and weather conditions were calm. Quality, preferred, and memorable sizes referenced in this summary are based on standard proportions of world record lengths developed for each species by the American Fisheries Society.

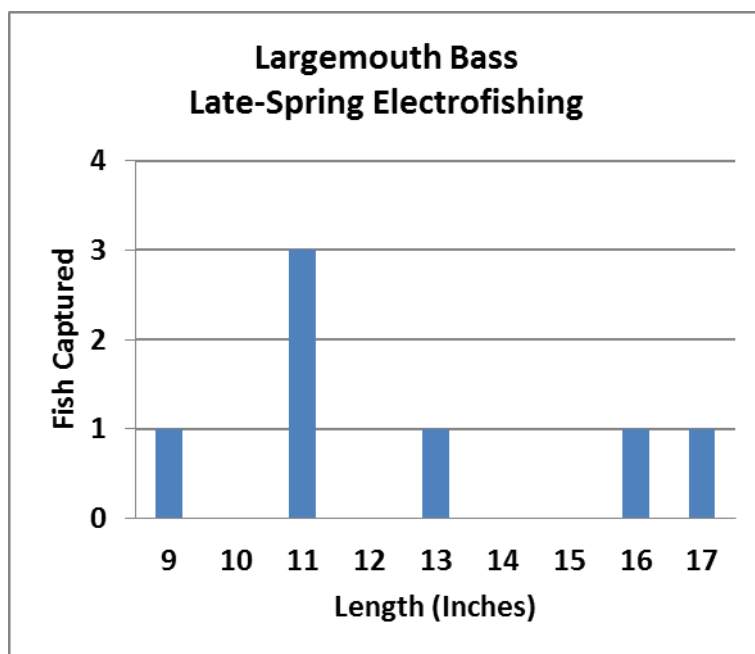
Habitat Characteristics

Eureka Lake is a 39-acre drainage lake (maximum and mean depths of 28 and 12 feet, respectively) with dark brown-stained water and low to moderate water clarity (Secchi disk visibility 4 feet; 1966 Wisconsin Conservation Department Surface Water Resources of Ashland County). A public boat landing with limited parking is available. The littoral zone (near-shore area where light is able to penetrate to the lake bottom) substrates are comprised primarily of sand, muck, and gravel with aquatic vegetation present.

Largemouth Bass



Captured 6 per mile $\geq 8''$	
Quality Size $\geq 12''$	43%
Preferred Size $\geq 15''$	29%



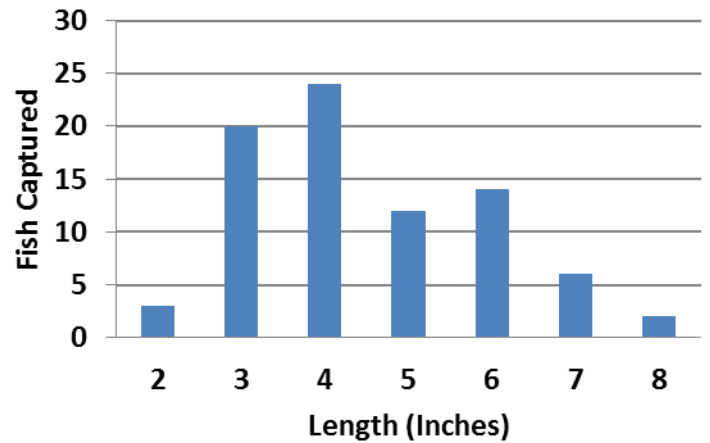
We captured largemouth bass at a relatively low rate (6 per mile) during the late-spring electrofishing survey. This sample, while probably reflective of low density, was too small to conclude anything about population size structure. No smallmouth bass were captured or seen during this survey.

Bluegill



Captured 156 per mile $\geq 3''$	
Quality Size $\geq 6''$	28%
Preferred Size $\geq 8''$	3%

Bluegill Late-Spring Electrofishing



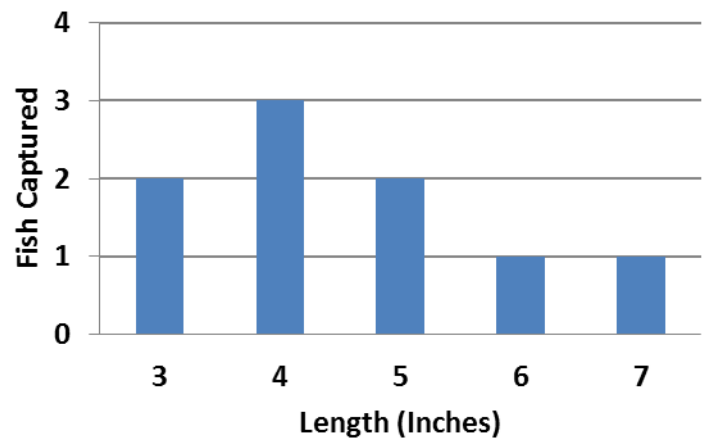
Bluegill ≥ 3 inches were captured at a moderate to high rate (156 per mile) during the late-spring electrofishing survey. The size structure of the population sample was poor, with few fish being of an acceptable size to anglers.

Pumpkinseed



Captured 18 per mile $\geq 3''$	
Quality Size $\geq 6''$	22%
Preferred Size $\geq 8''$	0%

Pumpkinseed Late-Spring Electrofishing

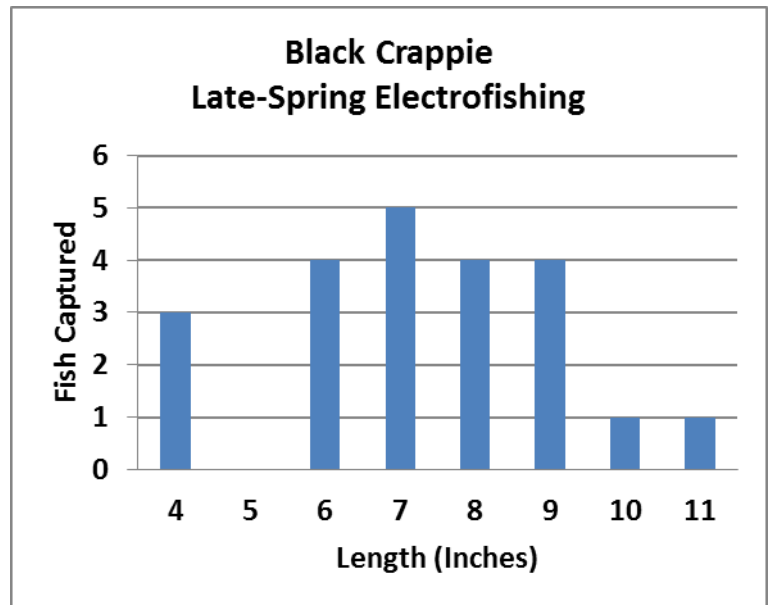


Pumpkinseed sunfish ≥ 3 inches were captured at a relatively low rate (18 per mile) during the late-spring electrofishing survey. As with bluegill, the size structure of the population was poor.

Black Crappie



Captured 38 per mile $\geq 5''$	
Quality Size $\geq 8''$	53%
Preferred Size $\geq 10''$	11%



Black crappie ≥ 5 inches were captured at a moderate rate (38 per mile) during the late-spring electrofishing survey. Electrofishing is not the best way to document the relative abundance of crappie, but our sample does reveal that there are a few crappies in Eureka Lake of an acceptable size to anglers.

Conclusions

The Eureka Lake fish community exhibits characteristics of a fishery in which the bass population is at an insufficient level to effectively control panfish, which showed signs of overabundance (e.g., moderately high capture rates and poor size structures). As a result, bluegill, pumpkinseed, and even crappie growth and size are probably being negatively affected as they compete with each other for limited space and food resources. In order to help rectify this problem, anglers are encouraged to release largemouth bass to promote predation on young panfish. Lowered abundances of panfish may promote increased growth as a result of decreased competition for available resources. As another way to control panfish numbers, we encourage anglers to selectively harvest the smaller ones while releasing the much fewer, larger fish.

Twelve northern pike (11 – 23 inches), a relatively high number of small yellow perch, and golden shiners were also captured. Data for these species are not displayed graphically here due to low sample size and/or sampling bias. But whenever we capture more northern pike than largemouth bass by electrofishing (an unusual phenomenon), it indicates that pike may be having a negative impact on the survival of young bass. Unfortunately, pike would rather eat slender perch and young bass 4-8 inches long (easier to capture and swallow) than chunky panfish, so they almost never help to control sunfish or crappies. Liberal harvest of pike might help restore balance to this fish community by allowing more largemouth bass to survive to adulthood.

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